

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-3 and 17 are presently pending in this application, Claims 4-16 having been canceled, Claim 1 having been amended and Claim 17 having been newly added by the present amendment.

In the outstanding Office Action, Claims 1-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over WO 95/04796 (hereinafter "WO '796") in view of JP 2000-053801 (hereinafter "JP '801").

Claim 1 has been amended and Claim 17 has been added herein. Also, Applicants respectfully request that Claims 4-16 be canceled without prejudice. The amendment and addition in the claims are believed to find support in the specification, claims and drawings as originally filed, and no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Before addressing the outstanding rejection based on the cited reference, a brief review of Claim 1 as currently amended is believed to be helpful. Claim 1 is directed to a process for decomposing a polymer into a monomer or oligomer, and recites "hydrolyzing a polymer with sub- or supercritical water, at least a part of the polymer being a polymer comprising a constitutional unit derived from an organic acid in the molecular structure, and the polymer being contacted with sub- or supercritical water in the presence of a water-insoluble base, wherein the water-insoluble base comprises at least one compound selected from the group consisting of CaCO_3 , BaCO_3 and $\text{Ca}(\text{OH})_2$." By hydrolyzing the polymer as such, the side reaction due to an organic acid can be suppressed, the decomposition of an

organic acid itself can be inhibited, and a reusable monomer, *e.g.*, an organic acid and an alcohol, can be produced in a high yield.¹

The Office Action states that “[i]t would have been obvious ... to have used the different metals or metal hydroxides or to replace the Sb_2O_3 disclosed by Matsubara during the depolymerization process of Azzam with a reasonable expectation of success” and that “[a] skilled artisan would have been motivated to use alternative bases in Azzam’s process with a reasonable expectation that these metal bases would be useful for the separation of the monomers.” Applicants respectfully traverse.

WO ‘796 is believed to describe a process for depolymerizing a polymer to obtain low molecular weight compounds, in which a reaction mixture of the polymer, sub- or supercritical water and an oxidant such as peroxides is reacted.² JP ‘801 describes a process for recovering an aromatic dicarboxylic acid, in which a polyester containing a very fine inorganic solid such as antimony oxide (Sb_2O_3) is hydrolyzed by using sub- or supercritical water and the aromatic dicarboxylic acid is recovered.³ The oxidants (peroxides etc.) in WO ‘796 and the very fine inorganic solid such as Sb_2O_3 in JP ‘801 are different in the nature from the “water- insoluble base ... selected from CaCO_3 , BaCO_3 and $\text{Ca}(\text{OH})_2$ ” recited in amended Claim 1, and are not believed to bring about the same effect as the claimed water-insoluble base. Thus, it is respectfully submitted that the modification proposed in the Office Action lacks a proper motivation, and it is believed to be a product of hindsight guided by Applicants’ disclosure. Accordingly, Applicants submit that WO ‘796 and JP ‘801 fail to teach or suggest “hydrolyzing a polymer with sub- or supercritical water, at least a part of the polymer being a polymer comprising a constitutional unit derived from an organic acid in the molecular structure, and the polymer being contacted with sub- or supercritical water in the

¹ Specification, page 7, lines 16 to 21, and the Examples.

² WO ‘796, page 9, lines 23 to 31.

³ JP ‘801, the paragraph [0013].

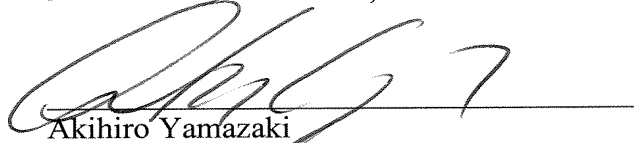
presence of a water-insoluble base, wherein the water-insoluble base comprises at least one compound selected from the group consisting of CaCO_3 , BaCO_3 and Ca(OH)_2 ” as recited in amended Claim 1. Therefore, Applicants respectfully request that the outstanding obviousness rejection be withdrawn.

For the foregoing reasons, Claim 1 is believed to be allowable. Furthermore, since Claims 2, 3 and 17 depend from Claim 1, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 2, 3 and 17 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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